

CHROMOSOME NUMBERS OF PHANEROGAMS. 2.

Chromosome numbers of phanerogams are reported below together with the voucher data and the herbaria where collections are deposited. Unless indicated the chromosomal records are based on the study of one plant. Haploid counts are from pollen mother cells and diploid counts are from root tips unless otherwise indicated. An asterisk indicates that one or more permanent slides are available at the Missouri Botanical Garden Herbarium.

The authors responsible for chromosome counts are listed alphabetically. Citation should have the form of: Doe, J, 1967. *In* Chromosome numbers of phanerogams. 2. *Ann. Missouri Bot. Gard.* **54**: pp.

BY THOMAS S. ELIAS

LEGUMINOSAE

Canavalia oxyphylla Standley & Williams: **2n = 22**. British Honduras: Stann Creek, S of Lynam Agricultural College, along stream, *Dwyer et al.* 551 (MO, SIU).

Cracca greenmanii Millsp.: **2n = 16**. British Honduras: Cayo, SW of Cayo at summit of Mayan Ruins, *Dwyer et al.* 257 (MO, SIU).

Crotalaria retusa L.: **2n = 16**. British Honduras: Belize, edge of road nr St. John's College, *Dwyer et al.* 12 (MO, SIU).

BY WALTER H. LEWIS, YUTAKA SUDA, AND ROYCE L. OLIVER¹

COMMELINACEAE

Aneilema cf. *beniniense* (P. Beauv.) Kunth: **2n = 52***. Seeds from Antwerp Bot Gard [originally tropical Africa], cultivated Missouri Bot Gard (66-7-2), voucher *Lewis* 6835 (MO).

Aneilema geniculatum (Jacq.) Woodson: **n = 16, 2n = 32***. Panama: Canal Zone, ca 19 mi from Colón, *Burch et al.* 1048 (GH, K, MO, UC, US).

Aneilema ovato-oblongum P. Beauv.: **n = 13*, 2n = 26***. Panama: Bocas del Toro Prov, Chiriquicito to 5 mi S along Río Guarumo, *Lewis et al.* 2027 (MO). This species is newly recorded for Panama and Central America.

Aneilema papuanum Warb.: **2n = 32***. Seeds from Antwerp Bot Gard [originally Papua], cultivated Missouri Bot Gard (65-25-1), voucher *Lewis* 6836 (MO).

Callisia repens L.: **2n = 14***. Panama: Chiriquí Prov, Boquete vic to 3 mi N, *Lewis et al.* 403 (F, GH, K, MO, NY, US). This species is newly reported for Panama.

Campelia zanonía (L.) H.B.K.: **2n = 16***—Fig. 1. Panama: Bocas del Toro Prov, 10-15 mi S from mouth of Changuinola River, *Lewis et al.* 883 (MO);

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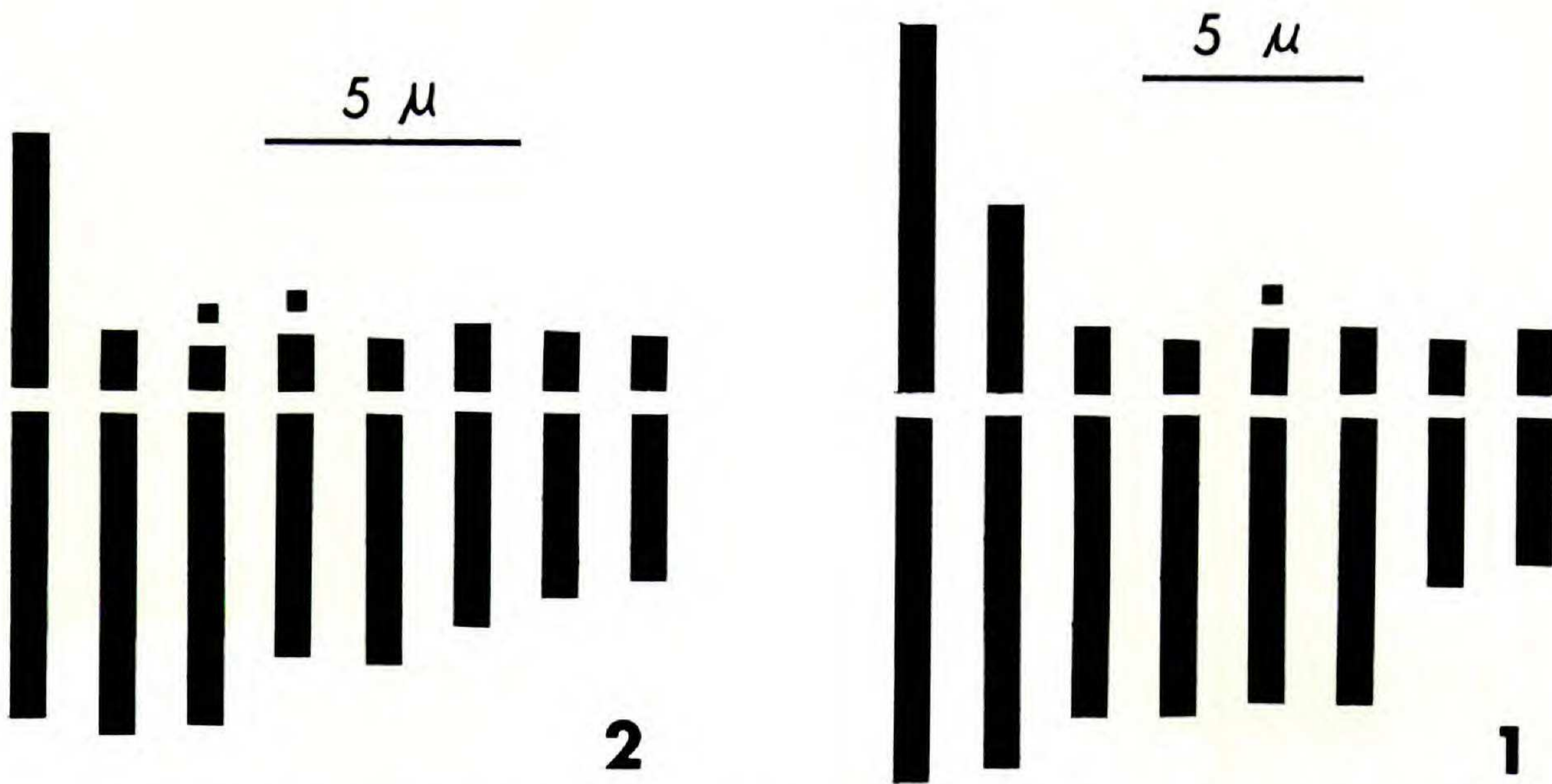


Fig. 1-2. Idiograms of *Campelia* and *Tripogandra* drawn from photographs originally at 4,500 \times (root tips pretreated with 0.1% colchicine for 1½ hr). Fig. 1. *C. zanonía* (Lewis et al. 833), $2n = 16$. Fig. 2. *T. pflanzii* (Lewis 6841), $2n = 16$.

Chiriqui Prov, Boquete vic to 3 mi N, Lewis et al. 414 (GH, MO, US). Following pretreatment the chromosomes range from 4.8-16.5 μ in length (Fig. 1) with the longest pair median, one submedian pair and six smaller subterminal pairs including a pair with satellites. This karyotype differs from that described by Darlington (Jour. Genet. **35**: 259-280, 1938) who found two large median pairs of chromosomes. This suggested to him a tetraploid condition and a basic number of 4 for *C. zanonía*, judgements which become questionable with our finding of only one median pair of chromosomes.

Cochliostemma jacobianum Koch & Linden: $2n = 38^*$. Cultivated Missouri Bot Gard (60-125-1) [originally Ecuador?], voucher Lewis 6837 (MO).

Commelina diffusa Burm. f.: $2n = 30^*$. Panama: Chiriquí Prov, Boquete vic to 3 mi N, Lewis et al. 403 (F, GH, K, MO, NY, US); Venezuela: Miranda St, first creek S of Cúa, Robertson & Austin 146 (MO).

Commelina sikkimensis C. B. Cl.: $2n = 90^*$. Seeds from Copenhagen Bot Gard [originally Sikkim], cultivated Missouri Bot Gard (65-58-1), voucher Lewis 6838 (MO).

Commelina virginica L.: $2n = 60^*$. Peru: Loreto Dept, Iquitos, bank overlooking Amazon River, Robertson & Austin 61 (MO); Venezuela: Miranda St, rd from Chirimena to Chuspa, Robertson & Austin 220 (MO), ca 25 km S of Caracas, Robertson & Austin 127 (MO).

Siderasis fuscata (Lodd.) H. E. Moore: $n = 19^*$, $2n = 38^*$. Cultivated Missouri Bot Gard (65-106-8) [originally Brazil], voucher Lewis 6839 (MO).

Tradescantia blossfeldiana Mildbr.: $n = \text{ca } 36$, $2n = 72^*$. Cultivated Missouri Bot Gard [originally Argentina?], voucher Lewis 6840 (MO).

Tradescantia commelinoides Roem. & Schult.: $2n = 38^*$. Panama: Chiriquí Prov, Boquete vic to 3 mi N, Lewis et al. 405 (GH, K, MO, UC, US).

Tripogandra cumanensis (Kunth) Woodson: **2n = 39***. Panama: San Blas Prov, mainland opposite Ailigandi, *Lewis et al.* 202 (GH, MO, UC, US).

Tripogandra elongata (G. F. W. Meyer) Woodson: **n = 24***, **2n = 48***. Panama: Chiriquí Prov, Boquete vic to 3 mi N, *Lewis et al.* 404 (F, GH, K, MO, NY, UC, US); Coelé Prov, hills NE of El Valle, *Lewis et al.* 1789 (MO); Panama Prov, 2-3 mi S of Goofy Lake on rd to Cerro Jefe, *Lewis et al.* 243 (GH, K, MO, UC, US).

Tripogandra pflanzii (Brüchn.) Rohw.: **n = 8***, **2n = 16***—Fig. 2. Seeds from Marburg Bot Gard [originally Bolivia], cultivated Missouri Bot Gard (66-24-3), voucher *Lewis* 6841 (MO). Following pretreatment the chromosomes range from 4.3-10.7 μ in length with one long median pair and seven much shorter sub-terminal pairs, two pairs of which have satellites.

Tripogandra warscewicziana (Kunth & Bouché) Woodson: **n = 8**. Cultivated Missouri Bot Gard, count made by Dr. Edgar Anderson, 4 Apr 1942, voucher MO 1063396.

CONVOLVULACEAE

Ipomoea alba L.: **2n = 30**. Peru: Loreto Dept, 5 km N of Iquitos, *Robertson & Austin* 48 (MO).

Ipomoea nil (L. emend. Curtis) Roth: **2n = 30***. Seeds from G. W. Park Seed Co, Greenwood, South Carolina, received as *I. volubilis gigantea*, progeny *Lewis* 6482 (MO, SMU), received as *I.* 'fancy fringed,' progeny *Lewis* 6484 (MO, SMU).

Ipomoea stolonifera (Cry.) Gmel.: **2n = 30**. British Honduras: Toledo Distr, Punta Gorda, *Dwyer et al.* 605 (MO).

Ipomoea sp.: **2n = 30**. Peru: Loreto Dept, Yanayacu, across Amazon River E of Iquitos, *Robertson & Austin* 95 (MO).

Ipomoea sp.: **2n = 30**. Venezuela: Miranda St, rd to Santa Teresa, ca 5 km from Autopista, *Robertson & Austin* 195 (MO).

Iseia luxurians (Moric.) O'Donell: **2n = 60**. Panama: Herrera Prov, rd from Chitré to Divisa, *Burch et al.* 1360 (MO).

Merremia aegyptia (L.) Urban: **2n = 28**. Panama: Herrera Prov, rd from La Avena to outskirts of Pese, *Burch et al.* 1292 (MO).

Merremia umbellata (L.) Hall. f.: **2n = 28***. British Honduras: Toledo Distr, Punta Gorda, *Dwyer et al.* 636 (MO); Venezuela: Miranda St, ca 2 km S of Charallave, *Robertson & Austin* 144 (MO).

PORTULACACEAE

Claytonia spathulata Dougl. ex Hook.: **n = 8**. California: Santa Clara Co, San Antonio Valley Rd, *Lewis* 6644 (MO). This species is reported by Nilsson (Bot. Not. **119**: 464-468, 1966) from British Columbia with $2n = 48$; the closely allied if not conspecific *C. gypsophiloides* Fisch. & Mey. is, however, also known with $2n = 16$ (Nilsson, loc. cit.).

Montia chamissoi (Ledeb. ex Spreng.) Robins & Fern.: **n = 11**. Idaho: Custer Co, 10.5 mi NNW of Mt Borah by Hwy 93A (in "Miniature Grand Canyon"),

Lewis 6769 (GH, LE, MO, UC). From field notes: "medium to small sized bivalents similar in size to those of *M. parvifolia*."

Montia parvifolia (Mocino ex DC.) Greene: $n = 11$. Montana: Missoula Co, 9.4 mi N of Missoula (from Blackfoot River) along Rattlesnake Creek, *Lewis* 6764 (MO), 2 plants.

ROSACEAE

Rosa moschata var. *abyssinica* (Lindl.) Rehder: $2n = 14^*$. Plant from U. S. National Arboretum (26783) [originally Ethiopia], cultivated Missouri Bot Gard, voucher *Lewis* 6842 (MO).

RUBIACEAE

Borreria verticellata (L.) G. F. W. Meyer: $2n = 28^*$. Venezuela: Guárico St, ca 8 km SE of Llanos Biol Sta, *Robertson & Austin* 164 (MO).

Hedyotis diffusa Willd.: $2n = 32^*$. Taiwan: Taipei Co, Suh Ting, *Huang* 4013, seeds from Dr. T. C. Huang, progeny *Lewis* 6790 (MO); Taipei, *Huang* 3941, seeds from Dr. T. C. Huang, progeny *Lewis* 6788 (MO).

Hedyotis nantoensis Hayata: $2n = 32$. Taiwan: Nantou Co, Sun Moon Lake, *Huang* 4016, seeds from Dr. T. C. Huang, progeny *Lewis* 6792 (MO). Doubtfully distinct from *H. diffusa*.

Neanotis hirsuta var. *glabricalycina* (Honda) W. H. Lewis: $2n = 36^*$. Taiwan: Taipei Co, Suh Ting, *Huang* 4012, seeds from Dr. T. C. Tuang, progeny *Lewis* 6791 (MO).

BY JOAN W. NOWICKE

NYCTAGINACEAE

Bougainvillea spectabilis Willd.: $2n = 34$. Missouri: St. Louis, cultivated Missouri Bot Gard, *Nowicke* 80 (MO).

PHYTOLACCACEAE

Rivina humilis L.: $2n = 108$. Missouri: St. Louis, cultivated Missouri Bot Gard, *Nowicke* 77 (MO).